

## REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-3, 6, 10 and 12-16 remain pending in the present application.

Claims 12 stands object to because of a repeated phrase appearing in that claim. The above amendments to claim 12 correct this error. Accordingly, applicant respectfully submits that the above amendment to the claims be entered and the objection withdrawn.

Claims 1 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent appln. no. 09/875,648 to Brunamoti et al. ("the '648 application")(Pub. No. 2001/0048079) in view of U.S. patent no. 4,622,464 to Sukigara et al. ("the '464 patent"). In addition, claims 2 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over the '648 application and the '464 patent in view of published U.S. Patent No. 6,369,387 to Eckles ("the '387 patent"). Finally, claims 6 and 12-16 stand rejected under 35 U.S.C. § 103 as being unpatentable the '648 application and the '464 patent in view of published U.S. Patent Application No. 10/108,957 to O'Leary, publication no. 2002/0153490 ("the '957 application"). Applicant respectfully traverses these rejections for the reasons presented below.

Independent claims 1 and 10, as amended, recites system and method adapted to analyze a concentration of a selected gas in a gas sample that includes a gas analyzer and a sample cell. The gas analyzer includes a gas analyzer housing, a receptacle defined in the gas analyzer housing, a source disposed in the gas analyzer housing, and an infrared radiation detector also disposed in the gas analyzer housing. The sample cell includes a sample cell housing adapted to be selectively disposed in the receptacle in the gas analyzer housing, a gas inlet disposed at a first end portion of the sample cell housing and on a first side of the sample cell, and a gas outlet disposed at a second end portion of the housing generally opposite the first end portion and on a second side of the sample cell generally opposite the first side of the sample cell. In addition, a gas flow passage is defined in the sample cell through at least a portion of the sample cell housing between the gas inlet and the gas outlet. Claim 1 also recites a length of the

gas flow passage defining the sample chamber is greater than a width of the gas flow passage, and that the gas inlet, the gas outlet, and the gas flow passage are disposed in a “Z” configuration. This “Z” configuration is further defined as having at least one angle through which gas passes that is less than 90°. Finally, claim 1 recites that at least a portion of a wall defining the gas flow passage includes an infrared reflective surface. Applicant submits that the cited references do not teach or suggest a system having these features.

For example, the ‘648 application lacks gas inlet and gas outlet for the sample cell as now recited in claims 1 and 10. The ‘648 application also lacks the ability to selectively provide a sample cell housing in a receptacle in the gas analyzer housing. It also lacks the “Z” configuration for the gas flow path that includes a sharp, i.e., less than 90° angle, along the gas flow path.

Independent claims 6 and 12 recite a system and method for analyzing the concentration of a selected gas in a gas sample. The claims include a gas analyzer and a sample cell. The gas analyzer includes a gas analyzer housing, a receptacle defined in the gas analyzer housing, a source disposed in the gas analyzer housing, a high numerical aperture lens disposed in the gas analyzer housing to receive radiation from the source and direct the emitted rays in a manner to be substantially parallel to each other, and an infrared radiation detector disposed in the gas analyzer housing. The sample cell includes a sample cell housing adapted to be selectively disposed in the receptacle, a gas inlet disposed at a first end portion of the sample cell housing, a gas outlet disposed at a second end portion of the sample cell housing, and a gas flow passage defined in the sample cell through at least a portion of the sample cell housing. The gas flow passage is disposed in a “Z” configuration in which at least one angle in the “Z” configuration through which gas passes is less than 90°. The length of the gas flow passage defining the sample chamber is greater than a width of the gas flow passage. Applicant submits that the cited references do not teach or suggest a system having these features.

For example, the ‘648 application lacks gas inlet and gas outlet for the sample cell as now recited in claims 6 and 12. The ‘648 application also lacks the ability to selectively provide a sample cell housing in a receptacle in the gas analyzer housing. It also lacks the “Z”

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configuration for the gas flow path that includes a sharp, i.e., less than 90° angle, along the gas flow path.

For the reasons presented above, applicant respectfully submits that independent claims 1, 6, 10, and 12 are not rendered obvious by the cited references. In addition, claims 2, 3, and 13-16 are also not rendered obvious due to their dependency from independent claims 1, 6, 10 or 12. Accordingly, applicant respectfully requests that the above rejection of claim 1-3, 6, 10, and 12-16 be withdrawn.

All objections and rejections have been addressed. It is respectfully submitted that the present application is in condition for allowance and a Notice to the effect is earnestly solicited.

Respectfully submitted,

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